

REMARKS

Status of Claims and The Present Invention

Claims 1-10 remain pending in the present application.

Claims 11-13 have been cancelled.

By the foregoing amendments, independent Claims 1, 4, 5, 9 and 10 have been amended to more clearly recite the novel features of the present invention. More particularly, the second processing aid particles now also must comprise "at least 50 parts by weight methyl methacrylate," which is supported by the present specification, as filed and published under US 2004/0077756, at paragraph [0060]. No new matter is believed to have been added to the claims by these amendments.

As previously explained, the present invention generally relates to a plastic additives powder composition, a method for preparing same, a thermoplastic resin blend comprising same, and a method for modifying a thermoplastic resin blend with same. As explained in paragraphs [0011]-[0012] of the published version of the present specification, US 2004/0077756, the plastic additives powder composition of the present invention is, generally speaking, a combination of impact modifier particles and at least one type of processing aid particles (i.e., 0 to 48 parts by weight of first processing aid particles and 2 to 50 parts by weight of second processing aid particles). The second processing aid particles must now also comprise at least 50 parts by weight methyl methacrylate. This combination of impact modifier particles and processing aid particles provides unexpected advantages compared to the results that persons of ordinary skill would expected when employing impact modifiers and processing aids separately in thermoplastic resins. More particularly, in paragraph [0011] of US'756, Applicants explained:

. . . The present inventors have discovered new plastics additives powder compositions that combine the functionality of a high rubber IM with the functionality of a PA without requiring an encapsulating shell and without requiring that the mean particle size of the IM and PA is less than 100 nm diameter. The plastics additives of the present invention further provide improved, impact strength and processing characteristics compared to using equal amounts of separate impact modifier and processing aids in

PVC formulations. Enhanced impact strength results by providing plastic additive powders containing IM particles having rubber contents exceeding 88% by weight of the IM, while excellent powder properties and processing aid functionality are provided by the method of coagulating these high rubber IM particles with PA particles. As a result, the plastics additives of the present invention provide thermoplastic resin formulators with: (1) ease of use in handling one powdery additive rather than two (both an IM and a PA); (2) reduced costs by allowing less total plastics additives to be used; and (3) improved impact properties as powdery impact modifiers containing greater than 88% rubber are now possible. (emphasis added).

Additional discussion of the unexpected advantages of combined impact modifiers and processing aids is provided in paragraph [0012] of US'756:

. . . Unexpectedly, we have found that the impact and processing properties achieved by the particular compositions of the present invention are more efficient and/or provide performance improvements compared to using the separate IM and PA powders. The PA particles also function to affect the preparation of high rubber IM polymer particles having rubber weight fractions greater than 88% as a free-flowing powder. Moreover, the PA particles further function to increase the dispersibility of such high rubber soft polymer particles in thermoplastic resins. (emphasis added).

The Present Invention As Claimed

To summarize, Claims 1-10 are intended, in general, to cover a composition which is a combination of impact modifier particles having high rubber content and a mean particle size greater than 100 nm, and at least one type of processing aid particles having a molecular weight of at least 1,000,000 g/mol and comprising at least 50 parts by weight methyl methacrylate (Claims 1-4), as well as a method for preparing the composition (Claims 5-8), a thermoplastic resin blend comprising the aforesaid composition and a thermoplastic resin (Claim 9), and a method for modifying a thermoplastic resin with the aforesaid composition (Claim 10).

Claim Rejections

On pages 2-3 of the Office Action, Claims 1-13 have been rejected, under 35 U.S.C. § 102(e), as being anticipated by US Patent No. 6,730,734 (Hamilton et al.). Applicants respectfully traverse this rejection for the following reasons.

Hamilton et al. fails to anticipate the present invention as recited in Claims 1-10 because it fails to disclose all the features of the present invention as recited in each of independent Claims 1, 4, 5, 9 and 10. More particularly, each of independent Claims 1, 4, 5, 9, and 10 requires the presence of impact modifier particles and at least one type of (i.e., "a second") processing aid particles having a molecular weight of at least 1,000,000 g/mol and comprising at least 50 parts by weight methyl methacrylate. The impact modifier composition disclosed by Hamilton et al. does not have any processing aid functionality, nor does it contain any processing aid particles. Rather, it is a blend of at least one of specified types impact modifiers, at least one mineral oil, and 0-50% by weight of one or more plastics resins. The Examiner has apparently, but incorrectly, concluded that the processing aid particles included in the plastics additives powder composition of the present invention are analogous to the one or more plastics resins of Hamilton et al. However, it is clear that they are not the same, nor analogous.

Rather, the plastics additives powder composition of the present invention (which comprises impact modifiers and processing aid particles) is added to plastics resins such as those used to formulate the impact modifier composition of Hamilton et al. Thus, the plastics resins disclosed by Hamilton et al. is more closely analogous to the thermoplastic resin used in the embodiments of the present invention which are recited in Claims 9 and 10. The plastics resins of Hamilton et al. do not provide processing aid improvements to plastics resins, but rather, they serve as optional carriers for the impact modifiers and mineral oil. In fact, addition of the plastics resins to the impact modifier-mineral oil combination, as taught by Hamilton et al., tends to dilute the beneficial functionality provided by the impact modifiers. To highlight that the second processing aid particles of the present invention are different from the plastics resins of Hamilton et al., each of independent Claims 1, 4, 5, 9 and 10 has been amended to require that the second processing aid particles comprise at least 50 parts by weight

methyl methacrylate. Hamilton et al. discloses that suitable plastics resins include polyvinyl halide resins, polyalkylene terephthalate polymers, and other listed plastics resins, none of which comprises at least 50 parts by weight methyl methacrylate and none of which would provide processing aid functionality when added back to other plastics resins, as do the processing aid particles that are used in the plastics additives powder composition of the present invention, recited in each of amended independent Claims 1, 4, 5, 9 and 10.

It is believed that amended independent Claims 1, 4, 5, 9, and 10, as well as Claims 2-3 and 6-8 which depend directly or indirectly from one of these independent claims, are patentable and allowable over Hamilton et al. Since Claims 11-13 have been cancelled, rejection of these claims is now moot.

Non-Statutory Double Patenting Rejection

Since Claims 11-13 have been cancelled from the present application, this rejection is rendered moot and, therefore, Applicants hereby request withdrawal of the Terminal Disclaimer previously submitted with the Amendment filed July 15, 2005.

Conclusion

Based on the foregoing amendments and discussion, it is believed that the subject matter of Claims 1-10 is patentable over Hamilton et al. Accordingly, re-examination and allowance of Claims 1-10 are hereby respectfully requested. If there are any outstanding issues which the Examiner believes could be resolved by telephone, the Examiner is cordially invited to telephone the undersigned attorney at the telephone number provided below.

Similarly, the \$790 fee believed to be due in connection with the filing of a Request For Continued Examination in connection with the present application is addressed by the accompanying completed Request For Continued Examination form.

No extension fees are believed to be due in connection with the submission of this Amendment, since it is being submitted within three months after the originally set

due date for response to the final Office Action. No additional fees are believed to be due. If, however, any such fees, including petition and extension fees, are due, the Commissioner is hereby authorized to charge such fees to **Deposit Account No. 18-1850**. In the meantime, please direct all future correspondence relating to the present application to the undersigned attorney.

Date: **December 1, 2005**
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Respectfully submitted,



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